



UNITED STATES PATENT AND TRADEMARK OFFICE

cm

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,295	03/29/2004	Sutherland Cook Ellwood JR.	20028-7004	1807

45623 7590 02/23/2007

PANORAMA FLAT

C/O PATENT LAW OFFICES OF MICHAEL E. WOODS

112 BARN ROAD

TIBURON, CA 94920

EXAMINER

RUDE, TIMOTHY L

ART UNIT

PAPER NUMBER

2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary**Application No.**

10/812,295

Applicant(s)

ELLWOOD, SUTHERLAND COOK

Examiner

Timothy L. Rude

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-36 and 91-110 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-36 and 91-110 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20061108</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

1. Claims 1-18 and 37-90 are canceled by Applicant. Claims 91-110 are added.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

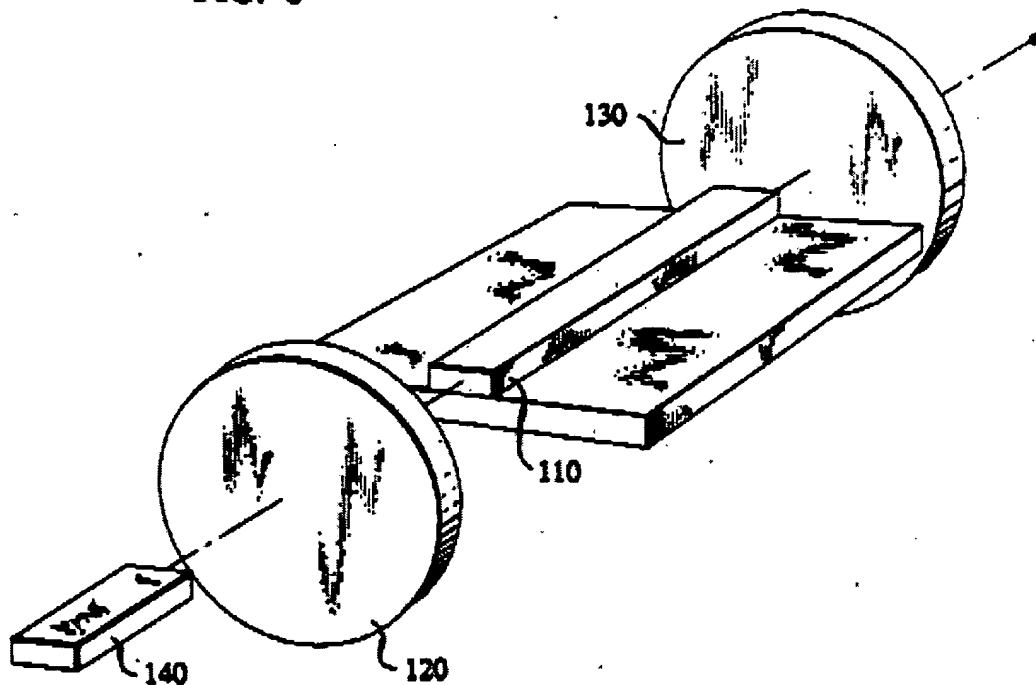
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, Jr. et al (Dillon) USPAT 5,031,983 in view of Bischel et al (Bischel) USPAT 6,078,704.

As to claims 19, 20, and 31-36, Dillon discloses improvements to a prior art integrated magneto-optic device [col. 1, line 10 through col. 4, line 56] that is a radiation wave intensity modulator, comprising: a first element for producing a wave component from a radiation wave [light source, 140, in Figure 6], said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations [col. 1, lines 21 and 22 and items 120 and 130 in Figure 6]; an

optical transport for receiving said wave component, said transport having a waveguiding region [YIG doped fiber],

FIG. 6



and one or more guiding regions coupled to said waveguiding region [regions between the polarizers and the YIG doped light guide in the integrated form of the device, col. 1, lines 52-60]; a transport influencer [magnetic coil, col. 7, lines 34-38], operatively coupled to said optical transport and having at least a portion integrated with one or more guiding regions of said one or more guiding regions [integrated form per col. 1, lines 52-60], for affecting said polarization property of said wave component responsive to a control signal; and a second element for interacting with said affected wave component wherein an intensity of said wave component is varied responsive to

said control signal [signal resulting in electromagnetic coil producing a field strength of 30 Oe, col. 7, lines 34-38]; wherein said first element and said second element are polarization filters [col. 1, lines 21 and 22].

Dillon does not explicitly disclose (illustrate) all of the details of the structure of the fully integrated device [see schematic representation at Figure 6].

Dillon teaches that all of the features may be incorporated in a fully integrated device [col. 1, lines 52-60] to serve as a building block for integrated optical devices.

Dillon is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add all of the details of the above structure into a fully integrated device to serve as a building block for integrated optical devices.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon to contain all of the details of the above structure in a fully integrated device of Dillon to serve as a building block for integrated optical devices.

Dillon does not explicitly disclose a display method, the method comprising: producing a radiation wave for each of a plurality of modulators, and asserting selectively each said control signal to independently control said intensity of each said modulator.

Bischel teaches the use of integrated electro-optical modulators in a display method, the method comprising: producing a radiation wave for each of a plurality of modulators, and asserting selectively each said control signal to independently control said intensity of each said modulator in order to take advantage of semiconductor diode

Art Unit: 2871

laser light sources to provide a high brightness, energy efficient, flat panel pixel display [Abstract and col. 4, lines 25-50].

Bischel is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add the use of integrated electro-optical modulators (of most any type, including electromagnetic) in a display method, the method comprising: producing a radiation wave for each of a plurality of modulators, and asserting selectively each said control signal to independently control said intensity of each said modulator in order to take advantage of semiconductor diode laser light sources to provide a high brightness, energy efficient, flat panel pixel display.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon with the use of integrated electro-optical modulators of Dillon in a display method, the method comprising: producing a radiation wave for each of a plurality of modulators, and asserting selectively each said control signal to independently control said intensity of each said modulator of Bischel in order to take advantage of semiconductor diode laser light sources to provide a high brightness, energy efficient, flat panel pixel display.

As to claim 21, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said elements are integrated into said transport [integrated form of the device, col. 1, lines 52-60].

As to claim 22, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property [col. 7, lines 34-38].

As to claim 23, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said influencer alters said polarization property by changing a rotation angle of said wave component in a range from about zero degrees to about ninety degrees [col. 1, line 40].

As to claim 24, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material integrated with said cladding [multi-layered YIG, col. 2, lines 55-65].

As to claim 25, Dillon in view of Bischel, as combined above, disclose the modulator of claim 6 wherein said magnetic material includes permanent magnetic material [YIG, col. 1, lines 20-25].

As to claim 26, Dillon in view of Bischel, as combined above, disclose the modulator of claim 6 wherein said magnetic material is selectively magnetized responsive to an electric current [magnetic coil, col. 7, lines 34-38].

As to claim 27, Dillon in view of Bischel, as combined above, disclose the modulator of claim 6 wherein said magnetic material is integrated into said fiber waveguide [col. 1, lines 20-25 and col. 2, lines 55-65].

As to claim 30, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said wave component may be extinguished [90 degrees to polarizer, col. 1, line 40].

3. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon in view of Bischel.

As to claims 28 and 29, Dillon in view of Bischel, as combined above, disclose the modulator of claim 23.

Dillon in view of Bischel do not explicitly disclose said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

Dillon teaches reciprocal and anti-reciprocal light-rotating devices as devices suitable for the intended use as modulators [MPEP 2144.07]. Also, use of circular

Art Unit: 2871

polarization vs linear polarization as an alternate mode suitable for light modulation has long been very well known in the art.

Dillon is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add right and left hand circular polarizers with or without crossed transmission orientation as an art recognized means suitable for polarizers and analyzers in a modulator.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon in view of Bischel with the right and left hand circular polarizers with or without crossed transmission orientation [crossed or aligned transmission orientation] of Dillon as an art recognized means suitable for polarizers and analyzers in a modulator.

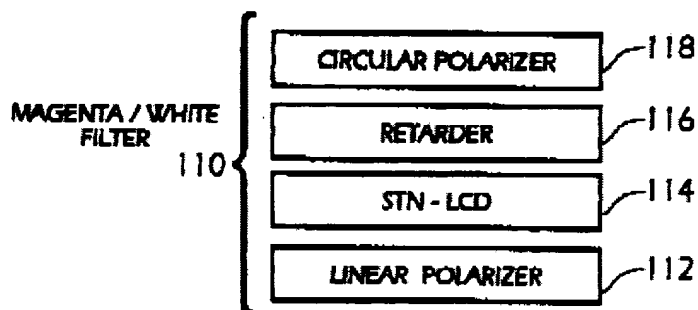
4. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon in view of Bischel and further in view of Conner et al (Conner) USPAT 5,548,422.

As to claims 28 and 29, Dillon in view of Bischel, as combined above, disclose the modulator of claim 23.

Dillon in view of Bischel do not explicitly disclose said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

Art Unit: 2871

Conner teaches reciprocal and anti-reciprocal light-rotating devices as devices suitable for improving the contrast of the modulation [more uniform black, i.e., more total extinction in the off state, col. 13, lines 14-29]. Also, use of circular polarization vs linear polarization (or in addition to linear polarization) for polarizers and analyzers has long been very well known in the art.

**Fig. 11**

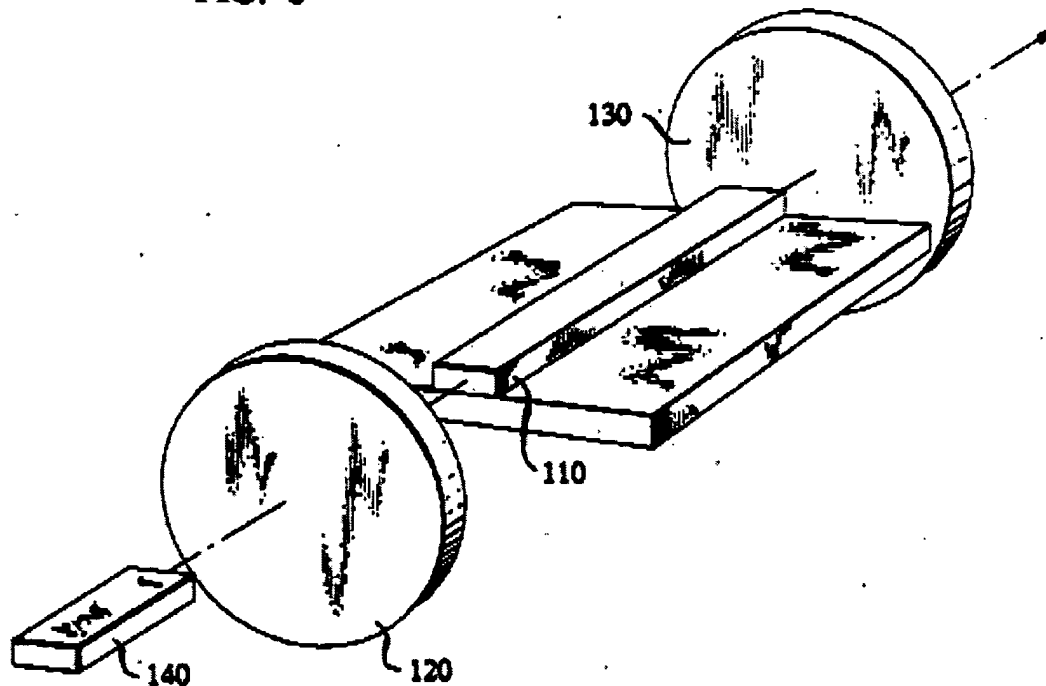
Conner is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add right and left hand circular polarizers with or without crossed transmission orientation to improve contrast of the modulation.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon in view of Bischel with the right and left hand circular polarizers with or without crossed transmission orientation of Conner to improve contrast of the modulation.

5. Claims 91-110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, Jr. et al (Dillon) USPAT 5,031,983 in view of Bischel et al (Bischel) USPAT 6,078,704, Kumayasu et al (Kumayasu) USPAT 6,792,192 B1, and Iwaki et al (Iwaki) USPAT 5,132,811.

As to claims 91, 92, and 103-110, Dillon discloses improvements to a prior art integrated magneto-optic device [col. 1, line 10 through col. 4, line 56] that is a radiation wave intensity modulator, comprising: a first element for producing a wave component from a radiation wave [light source, 140, in Figure 6], said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations [col. 1, lines 21 and 22 and items 120 and 130 in Figure 6]; an optical transport for receiving said wave component, said transport having a waveguiding region [YIG doped fiber],

FIG. 6



and one or more guiding regions coupled to said waveguiding region [regions between the polarizers and the YIG doped light guide in the integrated form of the device, col. 1, lines 52-60]; a transport influencer [magnetic coil, col. 7, lines 34-38], operatively coupled to said optical transport and having at least a portion integrated with one or more guiding regions of said one or more guiding regions [integrated form per col. 1, lines 52-60], for affecting said polarization property of said wave component responsive to a control signal; and a second element for interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal [signal resulting in electromagnetic coil producing a field strength of

30 Oe, col. 7, lines 34-38]; wherein said first element and said second element are polarization filters [col. 1, lines 21 and 22].

Dillon does not explicitly disclose (illustrate) all of the details of the structure of the fully integrated device [see schematic representation at Figure 6].

Dillon teaches that all of the features may be incorporated in a fully integrated device [col. 1, lines 52-60] to serve as a building block for integrated optical devices.

Dillon is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add all of the details of the above structure into a fully integrated device to serve as a building block for integrated optical devices.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon to contain all of the details of the above structure in a fully integrated device of Dillon to serve as a building block for integrated optical devices.

Dillon does not explicitly disclose a display method, the method comprising: producing a radiation wave for each of a plurality of modulators, and asserting selectively each said control signal to independently control said intensity of each said modulator.

Bischel teaches the use of integrated electro-optical modulators in a display method, the method comprising: producing a radiation wave for each of a plurality of modulators, and asserting selectively each said control signal to independently control said intensity of each said modulator in order to take advantage of semiconductor diode

Art Unit: 2871

laser light sources to provide a high brightness, energy efficient, flat panel pixel display [Abstract and col. 4, lines 25-50].

Bischel is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add the use of integrated electro-optical modulators (of most any type, including electromagnetic) in a display method, the method comprising: producing a radiation wave for each of a plurality of modulators, and asserting selectively each said control signal to independently control said intensity of each said modulator in order to take advantage of semiconductor diode laser light sources to provide a high brightness, energy efficient, flat panel pixel display.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon with the use of integrated electro-optical modulators of Dillon in a display method, the method comprising: producing a radiation wave for each of a plurality of modulators, and asserting selectively each said control signal to independently control said intensity of each said modulator of Bischel in order to take advantage of semiconductor diode laser light sources to provide a high brightness, energy efficient, flat panel pixel display.

As to limitations regarding dynamic and variable affect on the polarization property of the wave component of visible light, with at least one intermediate level, responsive to a varying control signal, examiner considers that an obvious outcome of the combination of Bischel to Dillon. However, in further support, please consider Iwaki and Kumayasu as follows:

Iwaki teaches that an optical wave component may be modulated by any of a liquid crystal light valve, a liquid crystal television, an electrochromic (electro-optic) display device and a magneto-optic display device (col. 4, line 61 through col. 5, line 2) as art recognized equivalents for the same purpose of modulating the light.

Iwaki is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to any of liquid crystal light valve, an electrochromic (electro-optic) display device and a magneto-optic display device (col. 4, line 61 through col. 5, line 2) as art recognized equivalents for the same purpose of modulating the light [MPEP 2144.06].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon with the teachings of Bischel to create a satisfactory display device using either of the (electro-optic) device of Bischel and/or the magneto-optic device of Dillon (col. 4, line 61 through col. 5, line 2) as art recognized equivalents for the same purpose of modulating the light [MPEP 2144.06].

Kumayasu teaches that a magneto-optic isolator teaches structure that can obviously be used as a variable magneto-optical attenuator with addition of a simple magnetic coil to provide magnetic field strength responsive to an electric signal (current) (well known in many arts for over a hundred years) [col. 1, line 50 through col. 2, line 56, especially col. 2, lines 46-56] to comprise a satisfactory variable magneto-optical attenuator.

Kumayasu is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add the electrical signal controlled optical attenuating display device of Bischel to the magneto-optic device of Dillon to comprise a satisfactory variable magneto-optical attenuator controlled display device.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon with the teachings of Bischel to create a satisfactory display device by combining the electrical signal controlled optical attenuating display device of Bischel to the magneto-optic device of Dillon to comprise a satisfactory variable magneto-optical attenuator controlled display device [Kumayasu col. 1, line 50 through col. 2, line 56, especially col. 2, lines 46-56].

As to claim 93, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said elements are integrated into said transport [integrated form of the device, col. 1, lines 52-60].

As to claim 94, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said influencer produces a controllable magnetic field parallel to a propagation direction of said wave through said transport to alter said polarization property [col. 7, lines 34-38].

As to claim 95, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said influencer alters said polarization property by

Art Unit: 2871

changing a rotation angle of said wave component in a range from about zero degrees to about ninety degrees [col. 1, line 40].

As to claim 96, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said transport is a fiber waveguide including a core and a cladding corresponding to one or more guiding regions of said one or more guiding regions and wherein said influencer includes a magnetic material integrated with said cladding [multi-layered YIG, col. 2, lines 55-65].

As to claim 97, Dillon in view of Bischel, as combined above, disclose the modulator of claim 6 wherein said magnetic material includes permanent magnetic material [YIG, col. 1, lines 20-25].

As to claim 98, Dillon in view of Bischel, as combined above, disclose the modulator of claim 6 wherein said magnetic material is selectively magnetized responsive to an electric current [magnetic coil, col. 7, lines 34-38].

As to claim 99, Dillon in view of Bischel, as combined above, disclose the modulator of claim 6 wherein said magnetic material is integrated into said fiber waveguide [col. 1, lines 20-25 and col. 2, lines 55-65].

As to claim 100, Dillon in view of Bischel, as combined above, disclose the modulator of claim 1 wherein said wave component may be extinguished [90 degrees to polarizer, col. 1, line 40].

6. Claims 100 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon in view of Bischel, Kumayasu, and Iwaki.

As to claims 100 and 101, Dillon in view of Bischel, as combined above in view of Kumayasu and Iwaki, disclose the modulator of claims 23 and 95.

Dillon in view of Bischel do not explicitly disclose said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

Dillon teaches reciprocal and anti-reciprocal light-rotating devices as devices suitable for the intended use as modulators [MPEP 2144.07]. Also, use of circular polarization vs linear polarization as an alternate mode suitable for light modulation has long been very well known in the art.

Dillon is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add right and left hand circular polarizers with or without crossed transmission orientation as an art recognized means suitable for polarizers and analyzers in a modulator.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon in view of Bischel with

Art Unit: 2871

the right and left hand circular polarizers with or without crossed transmission orientation [crossed or aligned transmission orientation] of Dillon as an art recognized means suitable for polarizers and analyzers in a modulator.

7. Claims 100 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon in view of Bischel, Kumayasu, Iwaki, and further in view of Conner et al (Conner) USPAT 5,548,422.

As to claims 100 and 101, Dillon in view of Bischel, as combined above in view of Kumayasu and Iwaki, disclose the modulator of claims 23 and 95.

Dillon in view of Bischel do not explicitly disclose said set of orthogonal polarization includes right hand circular polarization and left hand circular polarization.

Conner teaches reciprocal and anti-reciprocal light-rotating devices as devices suitable for improving the contrast of the modulation [more uniform black, i.e., more total extinction in the off state, col. 13, lines 14-29]. Also, use of circular polarization vs linear polarization (or in addition to linear polarization) for polarizers and analyzers has long been very well known in the art.

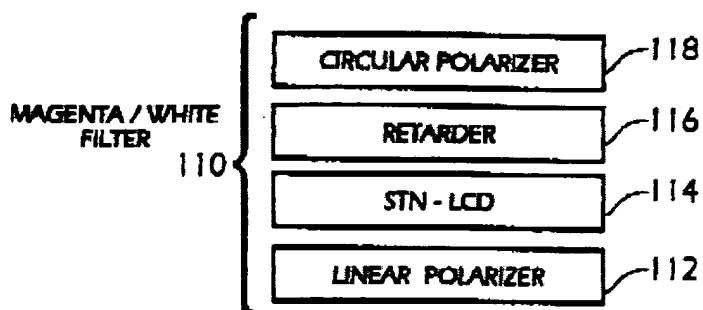


Fig. 11

Conner is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add right and left hand circular polarizers with or without crossed transmission orientation to improve contrast of the modulation.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dillon in view of Bischel with the right and left hand circular polarizers with or without crossed transmission orientation of Conner to improve contrast of the modulation.

Response to Arguments

Applicant's arguments filed on 30 October 2006 have been fully considered but they are not persuasive.

Applicant's ONLY substantive arguments are as follows:

(1) Regarding base claim 19, Dillon teaches an invariant device.

- (2) Regarding base claim 19, Dillon uses a constant magnetic field.
- (3) Regarding base claim 19, adding variance to Dillon would cause the device of Dillon to no longer function as an isolator.
- (4) Regarding base claim 19, Dillon does not teach a wave component varied responsive to a control signal.
- (5) Regarding base claim 19, Dillon does not teach visible light.
- (6) Regarding base claim 19, it is not possible to combine Bischel to Dillon.
- (7) Regarding base claim 19, lasers can cause eye damage.
- (8) Dependent claims are allowable because they directly or indirectly depend from an allowable base claim.

Examiner's responses to Applicant's ONLY arguments are as follows:

- (1) It is respectfully pointed out that the device of Dillon was made invariant by Dillon for a specific application wherein invariance was desired. One of ordinary skill in the art would know that such a method is not at all limited to applications requiring invariance. Variability is taught, with proper motivation to combine, by secondary reference, Bischel.
- (2) It is respectfully pointed out that the device of Dillon was made invariant by Dillon for a specific application wherein invariance was desired. One of ordinary skill in the art would know that such a method is not at all limited to applications requiring invariance. Variability is taught, with proper motivation to combine, by secondary reference, Bischel.

(3) It is respectfully pointed out that the device of Dillon would be functional as a variable attenuator as modified by the teachings of Bischel. This is well known in the art, see col. 1, line 50 through col. 2, line 56, especially col. 2, lines 46-56 of reference Kumayasu et al (Kumayasu) USPAT 6,792,192 B1 and col. 4, line 61 through col. 5, line 2 of reference Iwaki et al (Iwaki) USPAT 5,132,811. Please note that both Kumayasu and Iwaki are not applied to reject claims 19-36; however they do show that the combination of Bischel to Dillon would have been obvious to one of ordinary skill in the art.

(4) It is respectfully pointed out that the device of Dillon was made invariant by Dillon for a specific application wherein invariance was desired. One of ordinary skill in the art would know that such a method is not at all limited to applications requiring invariance. Variability suitable for an optical display is taught, with proper motivation to combine, by secondary reference, Bischel.

(5) It is respectfully pointed out that one of ordinary skill in the art would know that such a method is not at all limited to optical applications other than visible light. Variability of visible light suitable for an optical display is taught, with proper motivation to combine, by secondary reference, Bischel.

(6) It is respectfully pointed out that the device of Dillon would be functional as a variable attenuator of visible light in a display as modified by the teachings of Bischel. This is well known in the art, see col. 1, line 50 through col. 2, line 56, especially col. 2, lines 46-56 of reference Kumayasu et al (Kumayasu) USPAT 6,792,192 B1 and col. 4, line 61 through col. 5, line 2 of reference Iwaki et al (Iwaki) USPAT 5,132,811. Please

Art Unit: 2871

note that both Kumayasu and Iwaki are not applied to reject claims 19-36; however they do show that the combination of Bischel to Dillon would have been obvious to one of ordinary skill in the art.

(7) It is respectfully pointed out that the device of Dillon would be functional as a variable attenuator of visible light in a display without causing eye damage as modified by the teachings of Bischel. This is well known in the art, see col. 1, line 50 through col. 2, line 56, especially col. 2, lines 46-56 of reference Kumayasu et al (Kumayasu) USPAT 6,792,192 B1 and col. 4, line 61 through col. 5, line 2 of reference Iwaki et al (Iwaki) USPAT 5,132,811. Please note that both Kumayasu and Iwaki are not applied to reject claims 19-36; however they do show that the combination of Bischel to Dillon would have been obvious to one of ordinary skill in the art.

(8) It is respectfully pointed out that in so far as Applicant has not argued rejection(s) of the limitations of dependent claim(s), Applicant has acquiesced said rejection(s).

Any references cited but not applied are relevant to the instant Application.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



tlr

Timothy L Rude
Examiner
Art Unit 2871



David Nelms
Supervisory Patent Examiner
Technology Center 2800